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Concentrated foreign language programs have become instituted in the public schools. Reasons include: the realization that valuable information and knowledge have been written in other languages; the U.S.'s pivotal position as a leader in the world; and the genuine interest and awareness of the high school student.

The development of language laboratories, their early use by the Army, and audio-visual methods used for language instruction are presented.

The program was conducted in Johnson High School in Japan where the basic purpose of installing a language laboratory was to improve the ability of the student to use the language. The language program consisted of four phases - hearing, speaking, reading, and writing.

Seven appendices, containing price lists, floor plans, and advertisements illustrating versatility of machines are included.

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INSTALLING A MODERN LANGUAGE LABORATORY
IMPROVING THE FOREIGN LANGUAGE PROGRAM
AT JOHNSON HIGH SCHOOL

No. 226
Vol. XVIII
September, 1962
Price 50¢

Prepared by

J. H. Blackstead

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IMPROVING THE FOREIGN LANGUAGE PROGRAM AT JOHNSON HIGH SCHOOL: INSTALLING A MODERN LANGUAGE LABORATORY

Prepared by

J. H. Blackstead

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INTRODUCTION

Today, the world is witnessing the development of several newly independent nations. As interested and sometimes involved bystanders, we are observing these peoples, temporarily blinded by the over-powering emotion of "nationalism," making the same mistake made in the United States following the first World War. In severing ties with former protectors or controlling governments, the new nations, almost without exception, are making the severances complete to the extent that even the languages of the former patrons are now excluded. The only language to be used henceforth in the new independencies will be the native language of the indigenous population. It is hoped and expected that the new nations will see the error in their ways much sooner than did we in the United States.

It was the emotion of nationalism in the United States following the first World War which caused instruction in foreign languages to be virtually abandoned in the majority of the nation's school systems. The emotion was strong enough to exclude intelligent reason from the decisions of school boards.

Now today, the emotional connotations of "national defense" have greatly stimulated the revival of foreign language study of all levels of education. But, whereas just reason was absent in abandoning language study, it is most surely present in its revival.

The great impetus was given to foreign language study by the National Defense Education Act of 1958 wherein the Congress of the United States of America has legislated foreign languages into the category of defense weapons.

I. NEED FOR CONCENTRATED FOREIGN LANGUAGE STUDY

Man's ability to communicate is dependent upon his skill in using language. As his thought processes become more complex and abstract he needs a greater variety of language forms to communicate these thoughts. His need to express these thoughts to a wider range of receptive minds determines also his need for more language as a vehicle to carry these thoughts into an expanded area of time and space. Restricting the mind to expressing itself in one language is effective only as long as that mind is convinced of its own superiority. Under such conditions it experiences no need to be receptive beyond its own means of communication. A group of minds communicating in the same language, convinced of their collective superiority, experiences no need of receptive communication beyond the limits of the linguistic tool of the group. Thus, the American people, convinced of their superiority by successfully concluding two wars and raising their standard of living to the highest level known in modern times felt no need to be receptive in matters of communication beyond the limits of their own language.

Since 4 October 1957 when "Sputnik" was heard around the world and added its impact to the world political tension, the American mind has lost its feeling of self sufficiency and security - the two supports of American monolingualism.

Awakened to a realization that behind the achievements of other people lies a wealth of information concealed within language barriers, the American mind now feels a strong need to be receptive beyond the limits of its own language.

Our role of leadership in the free world, our government's huge foreign commitments in persons and in money, enormous private investments overseas, large-scale cultural exchanges of students, teachers, and leaders in many fields, jet travel, international cooperation in science and technology, and other worldwide involvements make it imperative that we learn to communicate freely with other peoples in their own language. We can no longer insist, as we have often done in the past, that other peoples learn English in order to speak with us. It is our national advantage to provide as many of our capable young people as possible with the necessary language skills.

We must now aim to achieve vastly more in foreign languages than we ever attempted before in high school. Instead of attracting a small percentage of the pupils to the study of a foreign language, and losing most of them before they have made any substantial progress, we must interest a far greater number of the high school pupils in considering the serious study of a second language and encourage them to continue the study long enough to make proficiency possible. Not only are language specialists essential, but also there is a need for large numbers of people in many professions and occupations who are competent in a foreign language in addition to their primary field of specialization.

That the public high schools are becoming aware of the importance of the study of foreign languages is made evident in the results of a survey made by the Modern Language Association of America for the United States Office of Education. Some of the more pertinent facts found in the survey released by the Commissioner of Education, Lawrence G. Derthick, are as follows:

1. During academic year 1958-1959, 1,300,000 or 16.5% of all public high school students were taking at least one modern foreign language, compared with 14.2% in 1954-1955 and 13.7% in 1948-1949.

2. In 1958-1959, 50.4% of all public high schools offered at least one modern foreign language, an increase from 43.6% of 1954-1955.

3. In 1958, Spanish was the most popular high school language with enrollments of 691,931 or 8.8% of the student population. French had 6.1%, German 1.2% and Italian .3%. Regular classes in Russian were reported by 25 states and the District of Columbia in 1958. Total enrollment amounted to .05% of the total national student population. Only a year earlier, just five states could report Russian in a total of nine public high schools. Nine other modern foreign languages were reported with total enrollments of 5,909; Chinese (21), Czech (7), Greek (34), Hawaiian (96), Hebrew (4,255), Norwegian (210), Polish (499), Portuguese (559), and Swedish (228).

4. Additional information is perhaps most significant of the increased emphasis on foreign language study in the United States; 21 states, and the District of Columbia reported foreign language enrollment in grade seven, and 24 states and District of Columbia in grade eight.[1]

That even greater advances in foreign languages study must be made is evident when we consider the fact that as of November 1960, 70% of all Americans in our foreign service could speak just one language - English; only one of our ambassadors to the Communist countries was able to speak the language of the country; in the 25 states and the District of Columbia where Russian is taught, there are some 8,000 students of the language as compared with 10,000,000 Russians studying English.[2] Several months ago, at the height of the concern about the quality of Russian education, the United States Office of Education obtained thirty textbooks on mathematics and science as used in the Soviet elementary-secondary schools. Today, almost a year later, those books are still largely unevaluated because of the lack of personnel with the necessary combination of competence in Russian and in the subject matter to make comparisons from partial translations with American school texts. In the meantime, a group from the United States Engineers Joint Council toured the Soviet Union last summer and found Russian engineers of good quality in depth and especially strong in languages, obviously ready for Soviet technical infiltration abroad in countries eager to accept technological help.[3]

All of the above emphasize the necessity of each high school's playing its part in improving its foreign language program. The report of a survey of language needs made in 1959 by the American Council of Learned Societies stated that there is a present, continuing demand for individuals trained in the official languages of all the nations with which the United States has business and diplomatic relations and also in some of the unofficial languages spoken by millions of inhabitants of foreign countries and territories.[4]

While the American high schools have been making some progress toward improving the foreign language picture, the American colleges and universities are making even greater progress. This, of course, has a profound effect upon the

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[1]United States Office of Education, Foreign Language Offerings and Enrollments in Public Secondary Schools, A Report Prepared by the Modern Language Association of America (Washington: Government Printing Office, 1959) pp. 1-16.

[2]Dr. Paul E. King, Language Teaching Comes of Age, National School Board Association Publications, Report 1959.

[3]Ibid.

[4]Johnston, Marjorie C.; Renner, Ilo; Sievers, Frank L. Modern Foreign Languages A Counselor's Guide. U. S. Department of Health, Education, and Welfare. (Washington Government Printing Office, Bulletin 1960, No. 20) p. 9.

high school preparation program of college-bound students.

Many colleges, in the light of changed conditions and critical needs, are instituting or restoring or raising admission requirements in foreign languages. Those raising their admission standards are recommending with increasing frequency that secondary school pupils take at least 4 years of a single foreign language rather than 2 years each of two foreign languages. The 1958 Report of the Commission on Liberal Education of the Association of American Colleges recommended that minimum foreign languages requirements for college entrance be raised as rapidly as possible to 4 years of language study. It seems likely that by the fall of 1963 admissions officers even in colleges that have no foreign language requirement for entrance will give priority consideration to applicants who meet the 4-year minimum recommended.[5]

The recommendations of the Chancellor's Committee on Foreign Language Study to the University of Kansas are illustrative of the thinking in many colleges and universities. It is proposed that beginning in the fall of 1965, students entering the University of Kansas must demonstrate a good reading proficiency in a modern or ancient foreign language. Students entering the junior year must demonstrate a good aural proficiency in a modern foreign language or a superior reading proficiency in an ancient language.[6]

Numerous institutions, public and private, are making similar changes in their entrance requirements. Beginning in 1962, for example, applicants for admission to Columbia University will have to present 3 years of a foreign language; at Cornell, also in the fall of 1962, 3 years will be required for admission while it is recommended that entrants have 4 years of one language and at least 2 years of another. Mount Holyoke College now requires 3 years of one foreign language plus 2 of a second, and beginning in the fall of this year, 1961, admission to Vassar will require 4 years of one foreign language or 3 years of one plus 2 years of a second. Among numerous other colleges with increased foreign language requirements are the University of Illinois, Rice Institute, Southern Methodist, Texas Christian and the University of Texas.[7]

Although requirements are most frequently expressed in terms of years or units of credit, there is growing interest in measuring language achievement and determining level of proficiency without regard to the amount of time spent in acquiring it. A policy statement of the Foreign Language Program of the Modern Language Association has defined proficiency as follows:

> "by 'reasonable proficiency' we mean, in the case of modern foreign languages, certain abilities, no matter how or when acquired:
>
> (a) the ability to get the sense of what an educated native says when he is speaking simply on a general subject, (b) the ability to use the common expressions needed for getting around in a foreign country, speaking with a pronunciation readily understandable to a native, (c) the ability to grasp directly the meaning of simple, nontechnical writing, except for an occasional word, and (d) the ability to write a short, simple letter.

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[5] Ibid. p. 20.

[6] Ibid. p. 21.

[7] Ibid. pp. 21-22.

> We spell out these skills because we believe that the increasingly important educational justification of a language requirement is not served by statement of the requirement solely in terms of course or credit hours."[8]

The University of San Francisco was one of the first to announce such a change in policy. All students entering after the 1958-59 academic year are required to become fluent in at least one foreign language before graduation. In the past, many students met the degree requirements without becoming fluent in a foreign language.

Looking ahead, as current trends continue, students will be entering college with better language preparation than at any time in the past.

II. THE PICTURE AT JOHNSON HIGH SCHOOL

Of immediate concern, then, is how well prepared in foreign languages are Johnson High School (Johnson Air Force Base in Japan) graduates and how does the foreign language program at Johnson High School compare with programs in other schools throughout the nation.

When Johnson High School first opened its doors in September 1959, the modern language program consisted of two years in both French and Spanish while two years of Latin were offered in the ancient language department. Today, Spanish is programmed through the third year while French is still offered only through the second year. Latin has remained, and will continue to remain as a two year program. Beginning with the 1961-62 school year, it is anticipated that both Spanish and French will be offered through a three year program with the possibility of a fourth year in Spanish. In addition, a first year of Basic Russian will be available to students who have demonstrated proclivity for foreign language study.

This program, with the exceptionally well-trained and experienced faculty which has been contracted for the coming year, places Johnson High School far above the level of the average American high school and approximates that of the majority of the more advanced public schools.

Unfortunately, there exists an important discrepancy between the Johnson program and that offered by a typical American counterpart. This point of variance occurs in the method of approach to modern foreign language study.

Due to large foreign language class enrollments and lack of supplementary facilities, the methodology followed at Johnson High School is, of necessity, what is referred to as "traditional in approach. That is to say, in brief, the emphasis in teaching is placed upon the grammatical construction of the language with supplementary reading and translation. Conversation, the real ability to use a language, is a hoped-for but hardly expected outcome.

American high schools with proven superior foreign language programs are using what is referred to as the "Aural-Oral" or "listening-speaking" approach. While grammar and reading are by no means neglected they are not given the position of primary importance which they hold under the traditional method. The primary objective of the Aural-Oral method is the ability to converse, the acquisition of this ability facilitating the capacity for grammatical construction and the concomitant ability to read.

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[8]Publications of the Modern Language Association of America, September 1956, Part 2, p. 24.

The superiority of the Aural-Oral approach has been graphically perceived at Johnson High School through transferring students:

> (a) A second year foreign language student transferred to Johnson from a mid-western school using the aural-oral method. Although this student was not of superior mental ability, it became immediately obvious that the student belonged in the top group of what would be the third year course at Johnson High School.
>
> (b) At the end of the first semester, a third-year language student transferred from Johnson to a west coast high school. This senior student was destined to be the valedictorian of the 1961 graduating class, having maintained a scholastic average of 3.97 through three and one-half years of high school. In the customary report on transferring students, Johnson High School was informed that the student was placed in advanced classes in both physics and higher mathematics but, unfortunately, the student had found it necessary to drop the foreign language because the aural-oral method was used from the first year on and the third year was conducted entirely in the foreign idiom.

The same foreign language and the same Johnson High School teacher were involved in each of the above cases. Therefore, a perfunctory examination of the cases might lead to the cursory observation that the classes at Johnson are being taught at a retarded rate or that the teacher is ill-prepared for instructing the foreign language. In regard to the former, the courses are being taught in the traditional method at a rate conforming to the ability of the group. In answer to the latter, the teacher has studied extensively abroad, earning a master's degree in courses taught in the native language. Of equal importance is the fact that, prior to coming to Japan, the teacher was employed as a foreign language specialist in the Seattle, Washington, Public School System. In this capacity, the teacher worked on an advanced program using the aural-oral method and is thus familiar with the advantages of this approach.

To reiterate, then, the disparity existing at a given time between the achievement level of a Johnson High School foreign language class and a similar class in one of the schools exemplified, must be attributed to the variance in methodology.

Now fully cognizant of the situation, there is a choice to be made regarding the future of the foreign language program at Johnson. One alternative is to follow the path of least resistance and continue with the traditional method, producing mediocre foreign language students who will compare more or less favorably with the average American pupil. The option favored by both faculty and administration is to progress to the aural-oral method, giving the Johnson High School student the opportunity of the optimum in achievement.

There are two ways in which the method can be taught, considering that active participation by each student in repetitive exercises is the foundation of the aural-oral method. One is by employing qualified teachers in sufficient quantity to limit individual class enrollments to 10 or less. Not only does the shortage of teachers prohibit this, it is also obviated by existing procedures which determine faculty size by a ratio to student enrollment. The alternate and most economical method, the method rapidly being adopted throughout the United States is through the utilization of a language laboratory.

The modern language laboratory consists of a system of individual tape recorders for the students connected to a master control panel operated by the instructor.

III. THE LANGUAGE LABORATORY AND THE AURAL-ORAL METHOD

The language laboratory was developed during World War II by the United States Army Language School. The school itself was established in 1941 when the armed services found that our language-trained people, including many who had majored in foreign languages, were unable to converse with native speakers. The army set up a crash program to provide "audio-lingual" (aural-oral or listening-speaking) skill to a fair number of carefully chosen men.

In the beginning, the "army method" made very little use of audio-visual aids. Only a few phonographs and a number of impounded foreign films were available. Later in the war came the "sound mirror," the first crude form of magnetic recording. Thus, through the dire need for people to communicate with a strange people in a strange tongue, came the concept that oral communication is of primary importance in learning a language and thus the language laboratory was conceived.

Today, with foreign language enrollments increasing proportionately more rapidly than the school population, language laboratories have been multiplying at an even greater rate than the enrollment. The United States Office of Education announced a year ago that there already were more than 1000 of them. Today there are doubtless many more.

There are still a few die-hard traditionalists who resist the audio-lingual method, but the general acceptance of the new approach is illustrated through official sanction by the Modern Language Association, the National Association of Secondary School Principals and all the national societies of foreign language teachers.

On the college level the language laboratory is an established, integral part of the foreign language program. The service academies are among the pioneers in the use of the language lab, the ultra modern system at the new Air Force Academy being a model in the field. Purdue University has one of the most elaborate systems in the United States with four separate laboratories, two 60-booth labs and two 30-booth labs.

The interest of the United States government in promoting the increased implementation of language laboratories is indicated by the great number of appropriations being granted toward the improvement and development of labs and their related materials.

Among the 115 major contracts concerned with improving foreign language study which were approved under the National Defense Education Act for fiscal year 1959 were:

(1) University of Colorado. $159,730.00, June 15, 1959 to December 15, 1960. Development and modification of instruments for the electronic analysis and synthesis of speech, and application of them for the phonetic comparison of English with French, German, and Spanish.

(2) Oberlin College, Ohio. $25,413.00, May 9, 1960 to June 30, 1961. Experimentation in the development of more effective methods of teaching foreign languages by making extensive usage of electromechanical aids.

(3) Colgate University, New York. $52,371.00, June 15, 1960 to August 1, 1961. Experimentation to determine the relative effectiveness of four systems of language laboratory equipment in teaching French pronunciation.

(4) University of Michigan. $116,452.00, June 15, 1960 to June 4, 1962. Development and testing of audio-lingual programs to facilitate a maximum of instruction in Russian, Spanish and Thai, and the design of equipment for these programs.

(5) International Communications Foundation, California. $89,423.00, March 15, 1960 to December 1, 1960. Preparation of audio-lingual materials for a first year course in Hinki-Urdu.

(6) Glastonbury Public Schools, Connecticut. $21,799.00, March 18, 1959 to June 17, 1959 and $1,074,218.00, June 25, 1959 to June 24, 1962. Development of audio-lingual materials for the teaching of French, German, Italian, Russian and Spanish in the secondary schools.[1]

The last project listed is indicative of the wealth of materials available to schools using the laboratory. The majority of the textbook companies already have supplementary tapes to go with their books and to augment teacher-made audio materials.

On the international scene, also, the shift to the aural-oral method and the use of the language lab has been increasing. The Russian approach, for example, has undergone a complete reversal of technique. Following are some pertinent facts revealed by Abraham Kreusler, Chairman of the Department of Russian Studies at Randolph-Macon in his research on language study in Soviet schools:

> Reorganization of the Soviet system of education has included far-reaching changes in curriculums, methods, and teaching practice. Within this general reform, the methodology of teaching foreign languages is undergoing a most significant change.
>
> The official method of language instruction adopted in the thirties and followed until the mid fifties was founded on the materialist philosophy of human consciousness which meant that a foreign language could be mastered only by translation into the vernacular and intense study of the grammar.
>
> With the realization of the unsatisfactory results of the method, the Soviets brought forth a new language curriculum stressing speaking, reading, and comprehension as the objectives of teaching foreign languages.
>
> Whereas the graduates of the secondary schools who studied under the old methodology were able to master grammatical and lexical material, they were unable to use the language they were studying. The graduates at the present day school are expected to be able to read simple texts without the dictionary. Graduates of special twelve year vocational schools who began study of the foreign language in the first grade, not only acquire a speaking and reading knowledge but also emerge with the ability to understand technical literature.
>
> The success of the new curriculum will depend on whether the Soviet schools will be able to provide competent teachers, good textbooks, and audio-visual aids. In addition to a vast program to improve teaching ability of the veteran instructors and to secure sufficient additional language teachers, the Soviets have revised their Foreign Language Institute study plan with speaking practice as the new core of the program. The new texts now in use are centered around analytic and synthetic reading and conversational material on everyday topics. But the most radical change in methodology has been the unusual speed and efficiency which the Soviet has shown in adapting audio-visual aids to the language field. The Teachers College of Gorki pioneered in this field, and the techniques developed there are being applied on a mass scale. Moscow Teachers College, which has installed an electronic teaching laboratory with modern equipment, will become one of the main centers for the development of electronic techniques.
>
> These same techniques are now rapidly becoming a part of the teaching process in the secondary schools.
>
> The new approach to foreign language study in the Soviet Union has the same main objective of the old direct method: The development of oral skill.
>
> Foreign language study, in the United States, has undergone a similar radical change in teaching methods where the stress on the oral-aural method signifies a shift from reading knowledge to a practical mastery of the language. The significant difference is that whereas the change in Russia is state-wide, the change in the US is dependent in each community upon the local school authorities.[2]

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[1] The Linguistic Reporter, NDEA, Title VI, Projects Are Summarized. Modern Language Association of America (Center of Applied Linguistics), Washington, Supplement No. 4, December 1960, pp. 2-5.

[2] Abraham Kreusler, "Language Study in Soviet Schools: The Story of a Search," The School Review, LXVIII No. 3 (Autumn, 1960), pp. 353-366.

In Japan, where developments in the electronics field have kept pace or advanced beyond those in other world countries, the language lab has been in use for several years.

The majority of Japanese colleges employ an andio-lingual system and Japanese high schools are following the advances being made with installations of their own.

Among American Dependent's High Schools in Japan, the Camp Zama High School is the only one to provide a language lab for their students to date.

The American High School in Japan, presently located in the Meguro district, is now planning to relocate in a new plant which is to include a modern foreign language laboratory.

A third school in the Tokyo area at which many American students matriculate and which uses the language lab is the International School of the Sacred Heart.

The primary purpose in installing a language laboratory is, of course, to help teach students the ability to use a foreign language. The laboratory improves language teaching only because it helps to concentrate training on the direct elements which constitute language. The laboratory forces language study to accomplish the purpose for which it is intended. To disregard the laboratory means to shut out a scientific advancement which directly affects the substance of which language is made.

Common sense dictates that with scientific progress which bears on the substance of a language there must be some way of utilizing that progress to advantage.

The learning of a language is a skill attained through a retraining of certain physical and mental processes. This skill, already possessed by a native speaker, is attainable through carefully controlled imitation. The greater the exposure to a second language the faster the language can be mastered. Witness the increasing number of colleges which list a period of study in the foreign country as a requirement for a degree in the language. The lab provides the opportunity to be in a language atmosphere not only a greater number of hours but with greater concentration.

The learning of a new language involves the retraining of muscular reflexes to produce sounds which may or may not exist in the students' native language. Each language utilizes only a fraction of the total number of sounds available to the human voice. Some of the sounds are parallel in the native and the foreign language, but others are completely different, or so different as to be misleading. The language laboratory singles out these meaningful sounds and provides the necessary practice to perfect each one until confusion is eliminated. The tireless laboratory provides the practice necessary for varying abilities of students.

The learning of a new language involves the ability to understand speech at the speed with which it is emitted by the native speaker. Any training which does not aim at understanding the native speaker misses its purpose in so far as exchange of ideas are concerned because ideas must be understood as they are expressed. When a sentence is heard it is not necessarily comprehended in full, even when spoken in the listeners' native tongue. A repetition of the sentence connects previously isolated images and creates

more meaning. If the first repetition is not sufficient, a second repetition creates more mental connections, until the total sentence is clear. The laboratory affords a tireless model which can repeat each expression until all parts of a sentence have been absorbed, without losing the normal speed of the native speaker. The mere listening to a foreign language tape can develop the ability to understand, even without repetition of any sort. A tape can provide models of all types of speech as well as geographical distribution of speakers, all of which was not possible before.

A language is composed of four main phases, based on the function which each phase performs, namely hearing, speaking, reading and writing. Heretofore, only the hearing-speaking phases have been mentioned. Turning to the reading phase, the benefits derived from the laboratory may not be so evident. Yet reading involves understanding of subject matter, and here the lab can be invaluable. It can train students to listen to passages read at normal speed. It can then focus the attention of the students on the content by a set of drills which are self-testing. Eventually the student will absorb the content of a passage either from the spoken word or the printed page. The student will thereby be prevented from reading without absorbing ideas. Questions can be answered directly from the content without recourse to translation. By constant mental connection between the sound and the printed symbol, the equivalent in the students' native language becomes unnecessary. Through reading, the lab can expand from mechanical reproduction of set phrases into content and ideas.

In the writing phase of language, the lab is invaluable for transferring oral expressions to the written symbol. When a unit of work has been thoroughly mastered orally, then drills can be provided for transferring all the new language to writing. Dictation drills fix each word and each phrase permanently in the student's mind.

The following summary of a report by Edward D. Allen, published in the December 1960 Modern Language Journal, reveals the greater progress made by students in a language laboratory in comparison with students of equal ability without lab experience:

> (1) Purpose of the study; to ascertain whether a limited use of the listening-recording lab during the class period would increase pupils' skills in hearing, speaking, reading, and writing of a foreign language.
>
> (2) Procedures: 54 tenth and eleventh grade pupils in the elementary and intermediate French and Spanish classes of the Center for School Experimentation, The Ohio State University were given a battery of tests in the fall of 1957. Students in each foreign language class were paired on the basis of their achievements on the standardized tests. This being accomplished, a random-choice technique was then used to decide which pupils would be in the lab and in the non-lab groups.
>
> One day per week the experimental group went to the lab while their "pairs" remained in the classroom. The lab-group listened to humorous or suspenseful tales in the foreign language, most of which were prepared by the instructor and were based on jokes and anecdotes which would hold the interest of a 15 or 16 year old student. Occasionally material was borrowed from standard textbooks for further listening experience. Then the students answered questions in the foreign language on the material they had just heard. Any remaining time was spent listening to commercially prepared recordings. At no time during the period did they see written material.
>
> The non-lab group received the material that the lab-group was using, but the non-lab group read it and answered questions in writing. To add variety to the work of the non-lab group, the teacher gave cross-word

puzzles based on the stories. In addition, the non-lab group had a free reading program from a collection of foreign language books on their level.

At the end of the school year all the students were again tested with a battery of achievement tests.

(3) Analysis of Tests Scores:

The Cooperative Tests in Spanish and French were constructed to measure the pupil's reading skill in the language of his knowledge of the written grammar. The non-lab group devoted 20 per cent more of their time to the reading and writing of the language than the lab-group. Despite this, the lab-group received much higher scores on this test. In Elementary French, the average percentile of the lab-group was 57; the average percentile of the non-lab group was 39.4 (the mean for public secondary schools in the middle west is the 45th percentile). In Intermediate French the lab-group averaged 38, whereas the non-lab group averaged 25. In Elementary Spanish the lab-group averaged 44.6, whereas the non-lab group averaged 36. In Intermediate Spanish the lab-group averaged 50, whereas the non-lab group averaged 43.

Another notable difference was in the results of the cooperative French Listening Test. The lab-group averaged 51 and the non-lab group 35.

(4) Conclusions:

Those students who spend 20 per cent of their time listening and speaking French and Spanish in the laboratory achieved significantly higher scores in reading, vocabulary, and grammar. This tends to corroborate the theory of leaders in the field of foreign language teaching that the more time pupils spend in listening and speaking the language, the better able they are to read it.[3]

It might possibly be misconstrued that acquisition of a language laboratory virtually eliminates the necessity for a qualified teacher. However, the function of the language laboratory being to provide efficient and understandable oral learning experiences, the teacher becomes more involved than ever before. With the lab, the students' level of

[3]Edward D. Allen, "The Effects of the Language Laboratory on the Development of Skill in a Foreign Language," The Modern Language Journal, XLIV No. 8 (December 1960), pp. 355-358.

participation far exceeds what they might ordinarily experience in many weeks of traditional classroom instruction where twenty to thirty-five students vie for the attention of one teacher. In the lab, pupils proceed at their own pace. Completely involved in listening, repeating and learning they become more demanding of a teacher's attention if they find themselves thwarted in this absorbing kind of activity. The teacher must listen to the progress of the individual so that students can be interrupted and advised or counseled when corrections are needed or partial learning is evident.

A compilation made by experienced language teachers of reasons why the laboratory teaches students to understand and to speak a foreign language more quickly and effectively than any other known medium was published in June 1960 issue of The Nations Schools:

(1) In the traditional classroom a student would speak few words and listen attentively only a fraction of the time; in the laboratory the student listens and speaks constantly the entire time.

(2) Distractions, aural or visual, are virtually non-existent. The student concentrates much better on the task at hand.

(3) Everyone hears well, no matter where he may be seated.

(4) Through the use of the recorded voice, the student is kept in closer contact with the teacher.

(5) More people can be reached and taught directly at one time by one teacher than is possible in a classroom situation.

(6) The student has the opportunity to hear native speakers.

(7) The student acquires a truer and more total concept of the language being studied through exposure to different timbres, pitch, and accents of both male and female voices.

(8) Provision for individual differences is obvious: fast students advance to new lessons, slow students repeat as often as necessary.

(9) Student motivation is in general greatly increased.

(10) Of great psychological importance is the fact that, alone in the booth, the student drops his inhibitions and responds normally to the oral exigencies of the lesson.

(11) The discipline problem is minimized. Students' faculties are absorbed by the inevitable progression of the lesson on the tape.

(12) Advance students have the opportunity to listen to plays and poetry, to study regional accents, etc.[4]

IV. ACQUIRING A LANGUAGE LABORATORY FOR JOHNSON HIGH SCHOOL

The United States government has clearly indicated cognizance of the importance of the language laboratory. Under provisions in Title III of the National Defense Education Act of 1958, the government will match costs with public schools installing a language laboratory.[1] Unfortunately, schools operated by the government are excluded from financial aid provided under the act.[2]

The California State Department of Education has prepared a guide for laboratory development for the Bureau of National Defense Education Act Administration. The guide lists three types of laboratories in use today:

1. Level I - Listening activity only
2. Level II - Listening and Speaking activity by students, with monitoring and intercommunication by the teacher possible with each student.
3. Level III - Listening, Speaking and Recording activity by students, with monitoring and intercommunication by the teacher possible with each student.[3]

The type of equipment most commonly in use today and found to be most practical is the Level III system utilizing the dual-channel tape recorder. In the dual-channel recorder, the two tracks of the tape are used simultaneously. The master voice is recorded on the lower half and, at the appropriate pause, the student's voice goes on the upper half. When this tape is played back the student hears both voices and thus is able to evaluate or check his response against that of the teacher. The student's voice can be erased separately and the same tape, with the master voice remaining, can be used over and over again.

Researching the quotations of all American firms producing laboratory equipment today, the California committee found an existing cost range of $10,000 to $16,000 for a 30-station laboratory.[4]

In Japan, the acquisition of a laboratory is considerably less expensive. The complete cost for a 30-station system, the size which would be required for the large foreign language enrollments at Johnson High School, would be $6,429.58. This would include the component parts, the master panel, all wiring and installation, the booths complete with attached students' desks and chairs, the

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[4] Fabrizi, Benedetto, "The How's, Why's and Where's of Language Laboratories," The Nations Schools, LXV No. 6 (June 1960), pp. 59-60.

[1] The United States Senate, "The National Defense Education Act of 1958," A Summary of Analysis of the Act Prepared by the Staff of the Committee on Labor and Public Welfare (Washington: Government Printing Office, September 5, 1958), p. 31.

[2] Ibid. Title I, Sec. 103 (i), p. 26.

[3] Bureau of Audio-Visual and School Library Education, A Guide for the Development of Language Laboratory Facilities, California State Department of Education (Sacramento: California State Printing Office) XXIX No. 10 (October 1960), p. 19.

[4] Ibid. p. 28.

controller platform and most important - a guarantee of equipment to include servicing over an extended period. This quotation was furnished by the AKAI Trading Company Ltd. of Tokyo. The equipment furnished would meet the specifications of operational requirements and standards of the higher-priced American equipment.

The only additional cost might be minor alteration and sound-proofing of the room available for the laboratory at Johnson High School. Although sound proofing is not mandatory, it provides the most desirable conditions.

Since the language laboratory would be operated at Johnson High School during the normal school operating hours, it could be utilized during the evening by classes from the Adult Education Center. This is the procedure which is followed in the lab at Camp Zama and is proving highly satisfactory.

V. SUMMARY

In a world where the mastery of foreign language is becoming increasingly more important, the language laboratory has ushered in a new era in modern language teaching. The language research program underway in the United States today is the largest of its kind ever attempted in the history of American education. It is expected to accomplish in four years what would normally have taken a half century. It is fervently hoped that the students of Johnson High School will be afforded the opportunity to advance through these new developments.

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APPENDIX I.

ITEMIZED PRICE LISTING SUBMITTED BY AKAI TRADING COMPANY LTD.

1.	Tape Recorder, 30 @ ¥ 45,000 . . .	¥ 1,350,000
2.	Master Controller	135,500
3.	Furnishings (including 30 stations to have recorders with attached desks and chairs, platform to house master controller)	628,000
4.	Wiring and installation costs . .	201,150
	Total	¥ 2,314,650
	Converted Total	$ 6,429.58

JOHNSON HIGH SCHOOL

Gym

T-1424

T-1550

34

33

Lockers

32

31

T-1551

T-1552

23 24-25

1 2

T-1553 Girls Lav.

T-1554

26 27

7 8

3 4

Shower Rm.

9 10 Lib.

5 6

Rooms 13, 14 and 15 in Building T-1556 will be the language classrooms with the proposed language lab to be installed in room 16.

T-1556

11 12

13 14

15 16

Boy Lav. 28

T-1433

Staff Loung. Nurse

Coun. Off.

T-1431

17 Lav.

Shower

T-1429

18

T-1428

19

20

21

Red Cross

T-1434

29 30

Lav.

Lav.

School Lunch Room Supply

Auditorium

Theater Arts

T-1437

22

Band

T-1560

BLDG. T-1556 RM. 16

30'

19'

BUTTRESS

BUTTRESS

23'

20'

14'

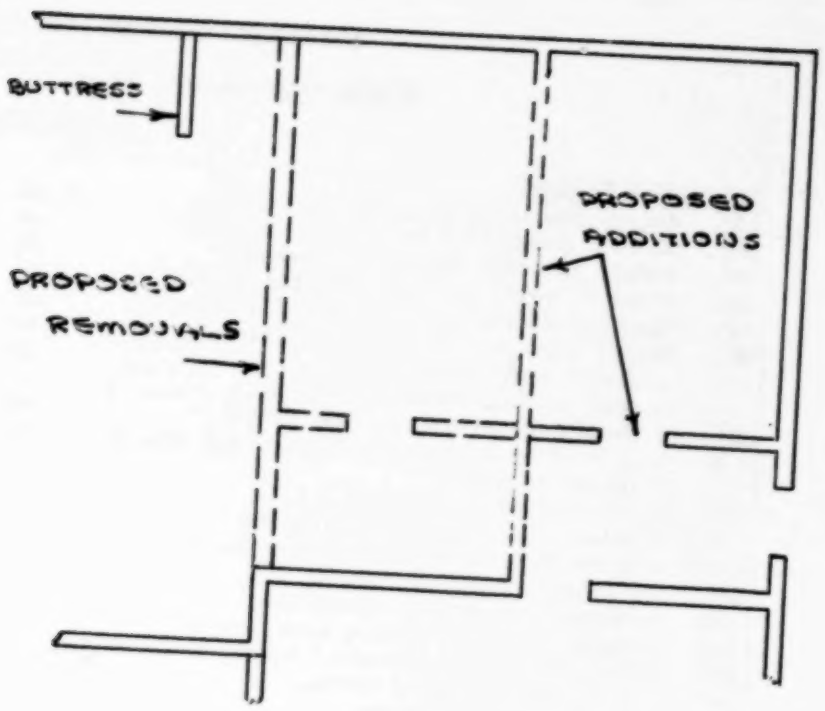
9'-6"

JOHNSON HIGH SCHOOL

LANGUAGE LABORATORY

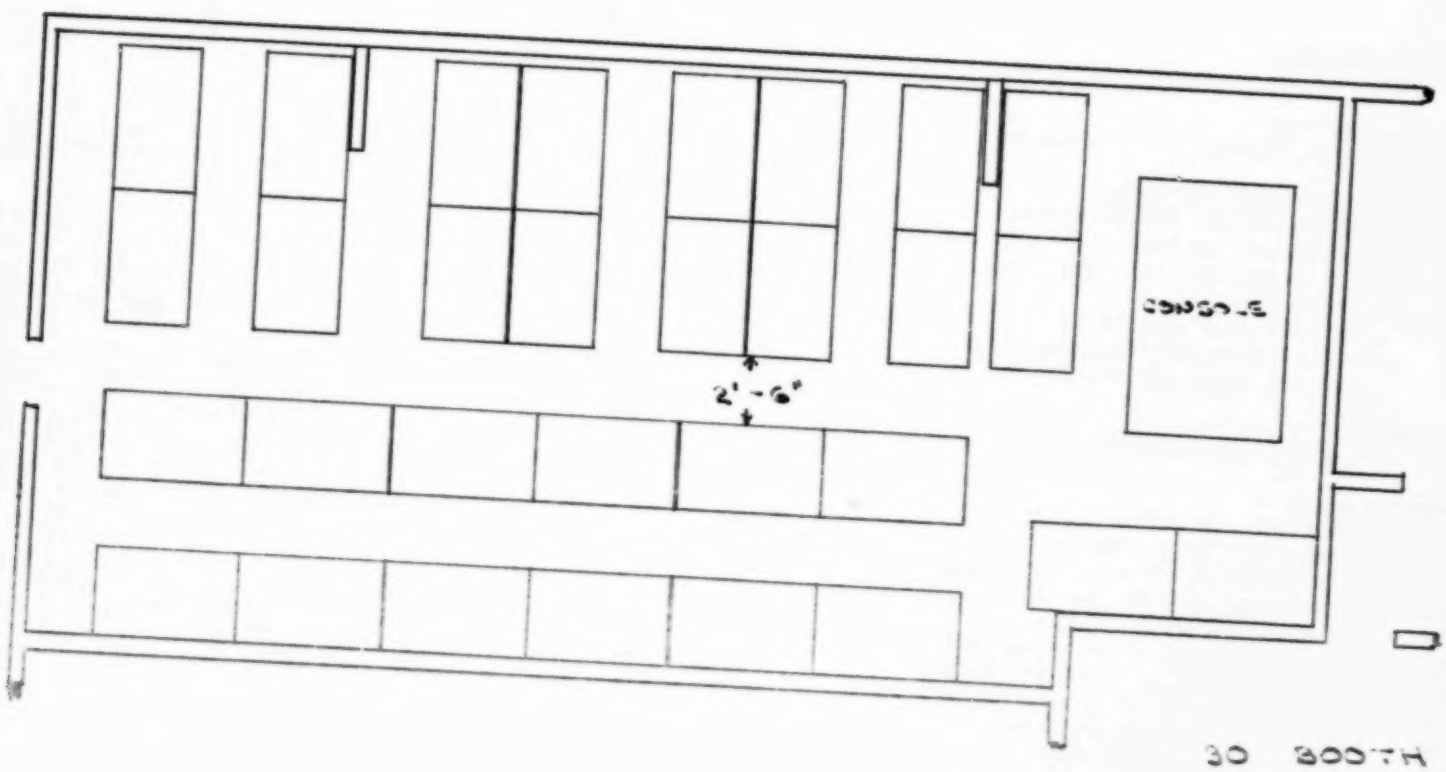
SCALE 1" = 6'-0"

PROPOSED
CHANGES:



SCALE 1"= 61-0"

BLDG. T-1556
RM. 16



30 BOOTH
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